REMARKS

SUMMARY

Reconsideration of the application is respectfully requested.

Claims 1-28 are in the application and are subject to examination. Claims 7, 15, 16, and 26 have been amended.

Applicant appreciatively acknowledges the Examiners consideration of the Applicant's previous arguments in "Response to Arguments," item 2 on page 2.

ALLOWED SUBJECT MATTER

Applicant also appreciatively acknowledges the Examiner's statement that claims 7, 15-16, and 26 "would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims." Accordingly, applicant has rewritten claims 7, 15, 16, and 26 in independent form including all of the limitations of the base claim and any intervening claims. Claims 7, 15, 16, and 26 are therefore believed to be patentable over the art and in condition for immediate allowance.

However, in light of the remarks made below, applicant also continues to respectfully believe that claims 1-6, 8-14, 17-25, and 27-28 are also patentable over the art.

CLAIM REJECTIONS UNDER 35 U.S.C. § 102

In "Claim Rejections – 35 USC § 102," item 3 on page 3 of the above-identified Final Office Action, claims 8-11 and 21-25 have been rejected as being fully anticipated by U.S. Patent No. 4,251,742 to Beelitz (hereinafter "Beelitz") under 35 U.S.C. § 102(b).

In "Claim Rejections – 35 USC § 102," item 4 on page 4 of the above-identified Final Office Action, claims 17-20 have been rejected as being fully anticipated by U.S. Patent No. 5,212,616 to Dhong, et al. (hereinafter "Dhong") under 35 U.S.C. § 102(b).

Applicant respectfully traverses both rejections.

The rejections have been noted, although it is believed that the claims were patentable over the cited art in their original form and, therefore, the claims have not been amended to overcome the references.

Before discussing Beelitz in detail, it is believed that a brief review of the invention as claimed, would be helpful. Claim 8 calls for, *inter alia*, a method comprising:

> pulling an output terminal, employing a first device, to a first output voltage when a supply voltage below a supply threshold is applied to ***an input terminal***, with the first device configured to have ***no substantial change in current consumption after the supply voltage*** applied to the input terminal has exceeded the supply threshold; and
>
> pulling the output terminal, employing a second device, ***to a second output voltage when the supply voltage applied to the input terminal exceeds the supply threshold.***

The Beelitz reference discloses discloses a two-level curent source for switching PIN diodes. The current source supplies a first level of current when the output voltage of a driver circuit is below a predetermined threshold value and a second level of current when the output voltage is above the predetermined value. Thus, Beelitz employs a component (current source) that changes in current "consumption" (level), when the output voltage is raised from below the threshold to a pre-determined level. (See *e.g.*, two-level current source 50 in Figures 2 and 3; col.8, lines 51-53; and the Abstract)

In contrast to the first and second levels of supply current in Beelitz, the first device described in claim 8 of the instant application upon receiving "a supply voltage...applied to an input terminal" is configured to have "no substantial change in current consumption after

the supply voltage applied to the input terminal has exceeded the supply threshold." Beelitz does not monitor an external current source applying the supply voltage to the circuit. Moreover, Beelitz actually teaches *away* from the various embodiments claimed in the instant application, because Beelitz requires a change in current for the different output voltages of the Beelitz current driver circuit, not "no substantial change in current consumption" as recited in claim 8. Similar language is also found in claim 21 of the instant application.

Specifically, in contrast to the variable current consumption found in Beelitz, the instant application recites that "a detector circuit to detect application of a supply voltage... including a plurality of of devices, where at least one of the devices is configured **to consume substantially a same amount of current when the supply voltage is below a supply threshold and when the supply voltage is above the supply threshold**" in claim 21.

Beelitz also fails to show "**pulling an output terminal**, employing a first device, to a first output voltage when a supply voltage is below a supply threshold...and **pulling the output terminal**, employing a second device, to a second output voltage when the supply voltage applied...exceeds the threshold" as recited in claim 8. Instead Beelitz is limited to changing the level of the current being supplied based on the output voltage. Thus, instead of "pulling the **output** terminal" as recited in claim 8 based on the supply voltage, Beelitz changes the **supply** current based on the output. In this manner, Beelitz actually teaches away from the instant application as recited in claim 8.

To anticipate the instant application Beelitz must teach EVERY element of the claims, specifically "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, not only must the claim be expressly or inherently described but, "**The identical invention** must be shown **in as complete detail as is contained in the ...**

claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)(emphasis added). In the instant case, Beelitz supplies a first level of current when the output voltage of a driver circuit is below a predetermined threshold value and a second level of current when the output voltage is above the predetermined value instead of the depletion transistor shown in Figure 2 of the instant application, which helps the detector circuit to exhibit "***no substantial change in current consumption after the supply voltage has exceeded the supply threshold***" as recited in claim 8 of the instant application. Nor does Beelitz show "***pulling an output terminal***" based in part on the supply voltage applied to the input terminal as recited in claim 8 of the instant application.

Before discussing Dhong in detail, it is believed that a brief review of the invention as claimed, would be helpful. Claim 17 calls for, *inter alia*, a method comprising:

> **pulling an output terminal to ground** with **a switching circuit** responding to a first detection voltage outputted by **a detector circuit** when a supply voltage is below a supply threshold, the detector circuit including a plurality of devices, where at least a first of the plurality of devices is **configured to consume substantially a same amount of current when the supply voltage is below the supply threshold, and when the supply voltage exceeds the supply threshold**; and
>
> **pulling the output terminal to the supply voltage**, with the switching circuit responding to a second detection voltage outputted by the detector circuit when the supply voltage exceeds the supply threshold.

The Dhong reference discloses voltage regulation and latch-up protection circuits. The voltage regulation circuit of Dhong turns off the power transistor when the average current exceeds a preset value. An alternative configuration in Dhong disables both the power transistor and voltage regulation circuit when the power supply voltage is lower than the trigger voltage. (See *e.g.*, col. 4, lines 37-41 and lines 48-50; col. 3, lines 9-12 and lines 24-29; and lines 11-15 and lines 21-24 of the Abstract).

As previously shown, to anticipate the instant application Dhong must teach every element of the claims. In contrast to turning the power transistor off or disabling the power transistor as described in Dhong, the instant application recites "**pulling an output terminal to ground...and...to the supply voltage**" in claim 17. Moreover, instead of turning the power transistor off or disabling the power transistor as described in Dhong, the detector circuit of the instant application employs "at least a first of the plurality of devices...configured to consume substantially **a same amount of current when the supply voltage is below the supply threshold, and when the supply voltage exceeds the supply threshold**" as recited in claim 17.

As a result, Dhong does not anticipate a device "configured to consume substantially **a same amount of current when the supply voltage is below the supply threshold, and when the supply voltage exceeds the supply threshold**" as recited in claim 17 of the instant application. Nor does Dhong illustrate "**pulling an output terminal** to ground...and...to the supply voltage" as recited in claim 17 of the instant application.

CLAIM REJECTIONS UNDER 35 U.S.C. § 103

In "Claim Rejections – 35 USC § 103," item 1 on page 4 of the above-identified Final Office Action, claims 1-5, 12-14, and 27-28 have been rejected as being obvious over U.S. Patent No. 4,716,323 to Wada, et al. (hereinafter "Wada") in view of Beelitz under 35 U.S.C. § 103(a).

As previously indicated, the rejection has been noted and claims 1 and 12 have been amended in an effort to even more clearly define the invention of the instant application. Support for the changes is found on pages 4-7 of the specification and shown in Figures 1-3 of the instant application.

As described in the previous response, the Wada reference discloses a circuit for detecting power voltage drops. More specifically, Fig. 1 of Wada discloses the use of a pair

of enhancement type MOS transistors Q1 and Q3 and a pair of depletion type MOS transistors Q2 and Q4. The voltage dividing circuit in Fig. 2 of Wada uses a resistor R and an n-channel enhancement MOS Q5. Fig. 2 of Wada also includes a switching portion of the circuit that uses both a p-channel (Q6) and an n-channel (Q7) MOS transistor, but they are both enhancement type transistors.

The transistors Q1 and Q2 of Wada form a voltage dividing circuit between the VDD terminal and the ground terminal. Q1 and Q2 in Wada do not show "***no change in current consumption after the supply voltage ...exceeded the supply threshold***" as recited in claim 1 of the instant application. Rather because Q1 of Wada is an enhancement n-channel MOS device, the combination of Q1 and Q2 in Wada will continue to increase current consumption even after the supply threshold is exceeded.

Among other requirements, the proposed combination of Wada and Beelitz must at least teach EVERY element of the claims in the instant application. In the instant case, the proposed combination of Wada and Beelitz fail to disclose the depletion transistor shown in Figure 2 of the instant application, which helps the detector circuit to exhibit "***no change in current consumption after the supply voltage ...exceeded the supply threshold***" as recited in claim 1 of the instant application.

A brief review of the invention as claimed is believed to be helpful before making further comparisons with the proposed combination of Wada and Beelitz. Claim 1 calls for, *inter alia*, a detector circuit comprising:

an input terminal;

a ground terminal;

an output terminal;

a first device coupled to the input and output terminals, to pull the output terminal to a first output voltage when a supply voltage below a supply threshold is applied to the input terminal, and the first device being configured to have **no**

substantial change in current consumption after the supply voltage applied to the input terminal has exceeded the supply threshold; and

a second device coupled to the input, ground and output terminals, to pull the output terminal to a second output voltage when the supply voltage applied to the input terminal exceeds the supply threshold.

Similar claim language may be found in independent claims 12 and 21 of the instant application.

As previously indicated, the voltage dividing circuit in Fig. 2 of Wada uses a resistor R and an n-channel enhancement MOS Q5. Similar resistor based dividing configurations are shown in Figs. 6 and 8-11 of Wada. Clearly, the resistor based dividing configurations of Wada depicted in Figs. 2, 6, and 8-12 do not show "***no substantial change in current consumption after the supply voltage ...exceeded the supply threshold***" as recited in claim 1 of the instant application. Similar language is found in independent claims 8 and 12 of the instant application.

As previously discussed, Beelitz does not overcome the deficiencies of Wada with respect to showing "***no change in current consumption after the supply voltage ...exceeded the supply threshold***" as recited in claim 1 of the instant application. Similar language is found in independent claims 8 and 12. Rather, Beelitz uses an internal "two-level current source supplying output current...and not supplying output current"(Col. 8, Lines 42-46) which results in current being supplied or not supplied based on a binary control signal. However, this does not show "***no change in current consumption after the supply voltage ...exceeded the supply threshold***" as is recited in claim 1 of the instant application.

It is accordingly believed to be clear that none of the references, whether taken alone or in any combination, either show or suggest the features of claim 1, 8, 12, or 21. Claims 1, 8, 12, and 21 are, therefore, believed to be patentable over the art. The dependent claims are

believed to be patentable as well because they all are ultimately dependent on claims 1, 8, 12, or 21.

In the event the Examiner should still find any of the remaining claims to be unpatentable, counsel would appreciate receiving a telephone call so that, if possible, patentable language can be worked out. In the alternative, the entry of the amendment is requested, as it is believed to place the application in better condition for appeal, without requiring extension of the field of search.

CONCLUSION

In view of the foregoing, reconsideration and allowance of claims 1-28 are solicited. As a result of the amendments made herein, Applicant submits that claims 1-28 are in condition for allowance. Accordingly, a Notice of Allowance is respectfully requested. If the Examiner has any questions concerning the present paper, the Examiner is kindly requested to contact the undersigned at (206) 407-1509. If any fees are due in connection with filing this paper, the Commissioner is authorized to charge the Deposit Account of Schwabe, Williamson and Wyatt, P.C., No. 50-0393.

Respectfully submitted,
SCHWABE, WILLIAMSON & WYATT, P.C.

Date: November 14, 2006 by: 

Kyle H. Flindt
Reg. No.: 42,539

Schwabe, Williamson & Wyatt, P.C.
Pacwest Center, Suites 1600-1900
1211 SW Fifth Avenue
Portland, Oregon 97222
Telephone: 503-222-9981